

Notice of Allowability

Application No.

10/769,765

Examiner

Shih-wen Hsieh

Applicant(s)

AOTO ET AL.

Art Unit

2861

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to election letter dated Oct. 13, 2005.
2. ☒ The allowed claim(s) is/are 1-4,7,10 and 13.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 3-16,30-04; 10-13-05
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

SHIH-WEN HSIEH
PRIMARY EXAMINER

Shih-wen Hsieh
Shih-wen Hsieh
Primary Examiner
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DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. Two "X" references (EP 0 656 429 and Publication "Epitaxial Growth of PB (ZRO.2TI0.8)03 on SI and its nanocale piezoelectric properties", Applied physics letters, American Institute of Physics, New York, US, Vol. 78, No. 14 2 April 2001, pages 2034-2036, XP001017515, ISSN: 0003-6951) in "European Search Report", dated Aug. 26, 2005 by Cook, S related to the elected species has been reviewed by the Examiner.

Election/Restrictions

3. Applicant's election without traverse of species I in the reply filed on Oct. 13, 2005 is acknowledged.
4. This application is in condition for allowance except for the presence of claims 5, 6, 8, 9, 11, 12, 14 and 15 to an invention non-elected without traverse

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in the reply filed on Oct. 13, 2005. Applicant is given ONE MONTH or THIRTY DAYS from the date of this letter, whichever is longer, to cancel the noted claims or take other appropriate action (37 CFR 1.144). Failure to take action during this period will be treated as authorization to cancel the noted claims by Examiner's Amendment and pass the case to issue. Extensions of time under 37 CFR 1.136(a) will not be permitted since this application will be passed to issue.

The prosecution of this case is closed except for consideration of the above matter.

5. Claims 1-4, 7, 10 and 13 are allowed (Note: claim 7 belongs to this species).

6. The following is an examiner's statement of reasons for allowance:

The primary reason for the allowance of claim is the inclusion of the limitation of a parameter "u" for the dielectric film has to satisfy:

$u = (C_c / C_a \times W_a / W_c)$, and the value of the parameter "u" is greater than 2. It is this limitation found in each of the claims, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes these claims allowable over the prior art.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

US 6,555,256 B1, "Method of depositing an electrically conductive oxide film on a textured metallic substrate and articles formed therefrom" issued to Christen et al., 4/2003 teaches a Ni substrate has a layer of $LaNiO_3$ deposited thereon. Fig. 1 is a x-ray diffraction scan of this $LaNiO_3 / Ni$ laminate showing the intensity and Full Width Half Maximum (FWHM). However, Christen et al. fail to teach the product of the ratios as those indicated in the reasons for allowance above.

US 6,783,588 B2, " $BaTiO_3$ - $PbTiO_3$ series single crystal and method of manufacturing the same piezoelectric type actuator and liquid discharge head using such piezoelectric type actuator", issued to Aoto et al., 8/2004 teaches in their figs. 3 and 4 a X-ray diffraction pattern of the $BaTiO_3$ - $PbTiO_3$ series single crystal. This reference of Aoto et al. also fail to teach the product of the ratios as those indicated in the reasons for allowance above.


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shih-wen Hsieh whose telephone number is 571-272-2256. The examiner can normally be reached on 7:30AM -5:00PM.

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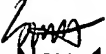
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dave Talbott can be reached on 571-272-1934. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

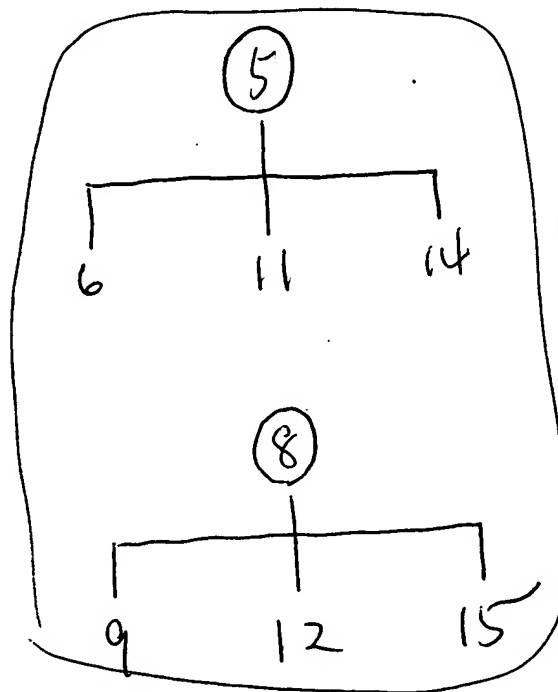
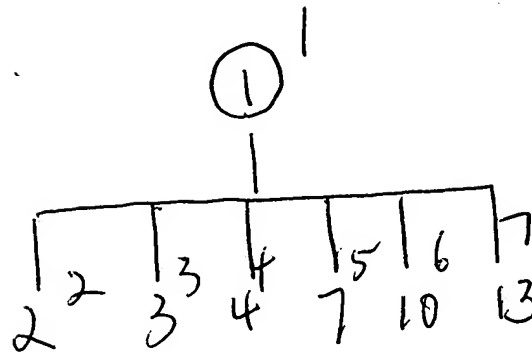
SHIH-WEN HSIEH
PRIMARY EXAMINER


Shih-wen Hsieh
Primary Examiner
Art Unit 2861

SWH


Nov. 17, 2005

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non-elected